

What is claimed is:

1 1. A TAB tape comprising:
2 a tape substrate of insulating material;
3 a first wiring pattern of conductive material, said first
4 wiring pattern being formed on one surface of said tape substrate;
5 a second wiring pattern of conductive material, said second
6 wiring pattern being formed on the other surface of said tape
7 substrate;
8 a conduction part that allows electrical conduction between
9 said first wiring pattern and said second wiring pattern; and
10 a stiffener that is adhered through adhesive to the other
11 surface of said tape substrate;
12 wherein said second wiring pattern includes an insulating
13 material filled in a groove region where no wiring pattern is formed
14 around wiring patterns of said second wiring pattern.

1 2. The TAB tape according to claim 1, wherein:
2 said insulating material is photosensitive solder resist.

1 3. The TAB tape according to claim 2, wherein:
2 said photosensitive solder resist has a thickness of -10 to
3 +20 μm comparing to that of wiring patterns of said second wiring
4 pattern.

1 4. The TAB tape according to claim 2, wherein:
2 said photosensitive solder resist is filled in said groove
3 region by screen printing.

1 5. A method of making a TAB tape comprising the steps of:
2 forming a first wiring pattern of conductive material on one
3 surface of a tape substrate of insulating material;
4 forming a second wiring pattern of conductive material on the
5 other surface of said tape substrate;
6 forming a conduction part that allows electrical conduction
7 between said first wiring pattern and said second wiring pattern;
8 and
9 adhering a stiffener through adhesive to the other surface
10 of said tape substrate;
11 wherein said adhering step is conducted after filling an
12 insulating material in a groove region where no wiring pattern is
13 formed around wiring patterns of said second wiring pattern.

1 6. The method of making a TAB tape according to claim 5,
2 wherein:
3 said insulating material is photosensitive solder resist.

1 7. The method of making a TAB tape according to claim 6,
2 wherein:
3 said photosensitive solder resist has a thickness of -10 to
4 +20 μm comparing to that of wiring patterns of said second wiring
5 pattern.

1 8. The method of making a TAB tape according to claim 6,
2 wherein:
3 said photosensitive solder resist is filled in said groove

4 region by screen printing.

1 9. A semiconductor device comprising:

2 a tape substrate of insulating material, said tape substrate
3 including an opening;

4 a first wiring pattern of conductive material, said first
5 wiring pattern being formed on one surface of said tape substrate;

6 a second wiring pattern of conductive material, said second
7 wiring pattern being formed on the other surface of said tape
8 substrate;

9 a conduction part that allows electrical conduction between
10 said first wiring pattern and said second wiring pattern; and

11 a stiffener that is adhered through adhesive to the other
12 surface of said tape substrate;

13 a semiconductor chip that is mounted on said stiffener in the
14 opening of said tape substrate;

15 bonding wires that connect between said semiconductor chip
16 and said second wiring pattern; and

17 sealing resin that seals said semiconductor chip;

18 wherein said second wiring pattern includes an insulating
19 material filled in a groove region where no wiring pattern is formed
20 around wiring patterns of said second wiring pattern.

1 10. The semiconductor device according to claim 9, wherein:

2 said insulating material is photosensitive solder resist.

1 11. The semiconductor device according to claim 10, wherein:

2 said photosensitive solder resist has a thickness of -10 to

3 +20 μ m comparing to that of wiring patterns of said second wiring
4 pattern.

1 12. The semiconductor device according to claim 10, wherein:
2 said photosensitive solder resist is filled in said groove
3 region by screen printing.